Field Effect Transistor

Small Signal FET

■ 2SK type (Junction type)

Part number	Package	Absolute maximum ratings (T_A = 25 °C)			Electrical characteristics (T_A = 25 °C)		Applications
		V_{GDO} (V)	I_D (mA)	P_T (mW)	$\lvert Y_{fs1}\rvert$ (ms)	I_{DSS} (mA)	
2SK104	TO-92	30	20	250	2.5 TYP.	2.5 TYP.	HF amplification
2SK105	TO-92	50	20	250	2.1	2.5	AF amplification
2SK162	TO-92	40	50	400	45	18	AF low noise amplification
2SK163	TO-92	50	30	400	9.0	8.0	AF low noise amplification
2SK193	SST	20	10	250	3.5	2.5	FM tuner
2SK195	TO-92	20	10	250	3.5	2.5	FM tuner
2SK505	TO-92	15	50	400	19	20	Video band RF amplification
2SK507	SST	15	50	350	19	20	Video band RF amplification
2SK514	SST	50	20	250	1.8	3.5	AF amplification
2SK518	TO-92	30	50	400	17	60	HF amplification
2SK519	SST	30	50	350	17	60	HF amplification
2SK523	TO-92	50	30	400	9.0	8.0	AF low noise amplification
2SK533	TO-92	50	30	400	9.0	8.0	AF low noise amplification
2SK660	SST	20	10	100	150 (MAX.)	0.5 (MAX.)	ECM impedance conversion
2SK997	SST	20	10	100	0.27	0.5 (MAX.)	ECM impedance conversion
2SK998	TO-92	20	35	350	16	20	HF amplification
2SK1000	SST	22*	50	250	28	20	AM tuner, HF amplification
2SK1109	Mini mold	20	10	80	0.48	0.6 (MAX.)	ECM impedance conversion

*: V_{GSD}

■ 2SK type (MOS type) (1/2)

Part number	Package	Absolute maximum rating (T_A = 25 °C)				Electrical characteristics (T_A = 25 °C)							Applications
		V_{DSS} (V)	I_D		P_T (W)	$\lvert y_{fs}\rvert$ (S)			$R_{DS(on)}$ (Ω)				
			DC (A)	Pulse (A)		V_{DS} (V)	I_D (A)	MIN.	V_{GS} (V)	I_D (A)	TYP.	MAX.	
2SK679A	TO-92	30	±0.5	±1.5	0.75	10	0.5	0.4	4	0.5	0.6	1.0	Switching
2SK680A	SC-62	30	±1.0	±2.0	1.0	10	0.5	0.4	4	0.5	0.6	1.0	
2SK681A	SP-8	30	±1.0	±2.0	1.0	10	0.5	0.4	4	0.5	0.6	1.0	
2SK1132	SST	50	0.1	0.2	0.25	5	0.02	0.03	4	0.02	30	50	
2SK1133	SC-59	50	0.1	0.2	0.2	5	0.02	0.03	4	0.02	30	50	
2SK1272	TO-92	60	±1.0	±2.0	0.75	10	0.5	0.4	4	0.5	—	1.0	
2SK1273	SC-62	60	±2.0	±4.0	2.0	10	0.5	0.4	4	0.5	—	1.0	

Field Effect Transistor

■ 2SK type (MOS type) (2/2)

Part number	Package	Absolute maximum rating (T_A = 25 °C)				Electrical characteristics (T_A = 25 °C)							Applications
		V_{DSS} (V)	I_D		P_T (W)	|y_{fs}| (S)			$R_{DS(on)}$ (Ω)				
			DC (A)	Pulse (A)		V_{DS} (V)	I_D (A)	MIN.	V_{GS} (V)	I_D (A)	TYP.	MAX.	
2SK1274	SP-8	60	±1.5	±3.0	1.0	10	0.5	0.4	4	0.5	—	1.0	Switching
2SK1398	SST	50	0.1	0.2	0.25	3	0.01	0.02	2.5	0.005	20	40	
2SK1399	SC-59	50	0.1	0.2	0.2	3	0.01	0.02	2.5	0.005	20	40	
2SK1482	TO-92	30	±1.5	±3.0	0.75	10	0.5	0.4	4	0.5	0.19	0.8	
2SK1483	SC-62	30	±2.0	±4.0	2.0	10	0.5	0.4	4	0.5	0.19	0.8	
2SK1484	TO-92	100	±0.5	±1.0	0.75	10	0.5	0.4	4	0.5	0.62	1.2	
2SK1485	SC-62	100	±1.0	±2.0	2.0	10	0.5	0.4	4	0.5	0.62	1.2	
2SK1580	SC-70	16	0.1	0.2	0.15	3	0.01	0.02	2.5	0.001	9	15	
2SK1581	SC-59	16	0.2	0.4	0.2	3	0.01	0.02	2.5	0.001	3.2	5	
2SK1582	SC-59	30	0.2	0.4	0.2	5	0.01	0.02	4	0.01	2.2	5	
2SK1583	SC-62	16	±0.5	±1.0	2.0	5	0.3	0.4	2.5	0.3	1.2	2.0	
2SK1584	SC-62	30	±0.5	±1.0	2.0	5	0.3	0.4	2.5	0.3	1.2	2.0	
2SK1585	SC-62	16	±1.0	±2.0	2.0	5	0.5	0.4	2.5	0.5	0.8	1.2	
2SK1586	SC-62	30	±1.0	±2.0	2.0	5	0.5	0.4	4	0.5	—	1.0	
2SK1587	SC-62	16	±2.0	±4.0	2.0	5	1.0	0.4	2.5	1.0	0.55	0.8	
2SK1588	SC-62	16	±3.0	±6.0	2.0	3	1.0	0.4	2.5	1.0	0.34	0.5	
2SK1589	SC-59	100	0.1	0.2	0.2	5	0.01	0.02	4	0.01	19	30	
2SK1590	SC-59	60	0.2	0.4	0.2	5	0.01	0.02	4	0.01	3.2	6	
2SK1591	SC-59	100	0.2	0.4	0.2	5	0.01	0.02	4	0.01	5.8	8	
2SK1592	SC-62	60	±0.5	±1.0	2.0	10	0.5	0.4	4	0.5	1.6	2.5	
2SK1593	SC-62	100	±0.5	±1.0	2.0	10	0.5	0.4	4	0.5	4.0	6.0	
2SK1824	3-pin ultra super mini	30	0.1	0.2	0.2	3	0.01	0.02	2.5	0.001	7	13	
2SK1958	SC-70	16	0.1	0.2	0.15	3	0.01	0.02	1.5	0.001	30	50	
2SK1959	SC-62	16	±2.0	±4.0	2.0	3	1.0	1.0	1.5	0.05	0.08	0.8	
2SK1960	SC-62	16	±3.0	±6.0	2.0	3	1.5	2.0	1.5	0.1	0.35	0.8	
2SK2053	MP-2	16	±5	±10	2.0	3	2.5	0.4	1.5	0.5	0.2	0.4	
2SK2054	MP-2	60	±3	±6	2.0	10	1.5	2.0	4	1.5	0.18	0.25	
2SK2055	MP-2	100	±2	±4	2.0	10	1.0	2.0	4	1.0	0.28	0.45	
2SK2070	SP-8	100	±1	±2	2.0	10	1.0	2.0	4	1.0	0.28	0.45	
2SK2090	SC-70	50	±0.1	±0.2	0.15	3	0.01	0.02	2.5	0.01	20	40	
2SK2109	SC-62	60	±0.5	±1.0	2.0	10	0.3	0.4	4	0.3	0.55	1.5	
2SK2110	SC-62	100	±0.5	±1.0	2.0	10	0.3	0.4	4	0.3	0.90	2.0	
2SK2111	SC-62	60	±1.0	±2.0	2.0	10	0.5	0.4	4	0.5	0.35	1.0	
2SK2112	SC-62	100	±1.0	±2.0	2.0	10	0.5	0.4	4	0.5	0.67	1.5	
2SK2157	MP-2	30	±5	±10	2.0	10	2.5	2.0	4	2.5	0.08	0.15	
2SK2158	SC-59	50	0.1	0.2	0.2	3	0.01	0.02	1.5	0.001	21	50	
2SK2159	SC-62	60	±2	±4	2.0	10	1.0	0.4	1.5	0.1	0.26	0.7	
2SK2541	SST	50	±0.1	±0.2	0.2	3	0.01	0.02	1.5	0.001	21	50	

Field Effect Transistor

■ 2SJ type (Junction type)

Part number	Package	Absolute maximum ratings (T_A = 25 °C)			Electrical characteristics (T_A = 25 °C)		Applications
		V_{GDO} (V)	I_D (mA)	P_T (mW)	$\|Y_{fs1}\|$ (mS)	I_{DSS} (mA)	
2SJ44	TO-92	40	30	400	9.0 TYP.	9.0 TYP.	AF low noise amplification
2SJ45	TO-92	40	30	400	9.0	9.0	AF amplification

■ 2SJ type (MOS type)

Part number	Package	Absolute maximum rating (T_A = 25 °C)				Electrical characteristics (T_A = 25 °C)							Applications
		V_{DSS} (V)	I_D		P_T T_C = 25 °C (W)	$\|y_{fs}\|$ (S)			$R_{DS(on)}$ (Ω)				
			DC (A)	Pulse (A)		V_{DS} (V)	I_D (A)	MIN.	V_{GS} (V)	I_D (A)	TYP.	MAX.	
2SJ165	SST	−50	∓0.1	∓0.2	0.25	−5	−0.02	0.03	−4	−0.02	22	50	Switching
2SJ166	SC-59	−50	∓0.1	∓0.2	0.2	−5	−0.02	0.03	−4	−0.02	22	50	
2SJ178	TO-92	−30	∓1.0	∓2.0	0.75	−10	−0.5	0.4	−4	−0.5	—	1.5	
2SJ179	SC-62	−30	∓1.5	∓3.0	2.0	−10	−0.5	0.4	−4	−0.5	—	1.5	
2SJ180	SP-8	−30	∓1.0	∓2.0	1.0	−10	−0.5	0.4	−4	−0.5	—	1.5	
2SJ184	SST	−50	∓0.1	∓0.2	0.25	−5	−0.02	0.02	−2.5	−0.05	25	40	
2SJ185	SC-59	−50	∓0.1	∓0.2	0.2	−5	−0.02	0.02	−2.5	−0.05	25	40	
2SJ196	TO-92	−60	∓1.0	∓2.0	0.75	−10	−0.5	0.4	−4	−0.5	0.89	1.5	
2SJ197	SC-62	−60	∓1.5	∓3.0	2.0	−10	−0.5	0.4	−4	−0.5	0.89	1.5	
2SJ198	TO-92	−100	∓0.5	∓1.0	0.75	−10	−0.5	0.4	−4	−0.5	1.7	2.0	
2SJ199	SC-62	−100	∓1.0	∓2.0	2.0	−10	−0.5	0.4	−4	−0.5	1.7	2.0	
2SJ202	SC-70	−16	∓0.1	∓0.2	0.15	−3	−0.01	0.02	−2.5	−0.001	—	60	
2SJ203	SC-59	−16	∓0.2	∓0.4	0.2	−3	−0.01	0.02	−2.5	−0.001	16	20	
2SJ204	SC-59	−30	∓0.2	∓0.4	0.2	−3	−0.01	0.02	−2.5	−0.001	8.8	15	
2SJ205	SC-62	−16	∓0.5	∓1.0	2.0	−5	−0.3	0.4	−2.5	−0.3	2.2	5.0	
2SJ206	SC-62	−30	∓0.5	∓1.0	2.0	−5	−0.3	0.4	−2.5	−0.3	2.8	3.0	
2SJ207	SC-62	−16	∓1.0	∓2.0	2.0	−5	−0.5	0.4	−2.5	−0.5	1.5	2.0	
2SJ208	SC-62	−16	∓2.0	∓4.0	2.0	−5	−1.0	0.4	−2.5	−1.0	0.6	1.5	
2SJ209	SC-59	−100	∓0.1	∓0.2	0.2	−5	−0.01	0.02	−4	−0.01	60	100	
2SJ210	SC-59	−60	∓0.2	∓0.4	0.2	−5	−0.01	0.02	−4	−0.01	10	15	
2SJ211	SC-59	−100	∓0.2	∓0.4	0.2	−5	−0.01	0.02	−4	−0.01	18	30	
2SJ212	SC-62	−60	∓0.5	∓1.0	2.0	−10	−0.5	0.4	−4	−0.5	1.8	4.0	
2SJ218	SC-62	−100	∓0.5	∓1.0	2.0	−10	−0.5	0.4	−4	−0.5	2.7	5.0	
2SJ243	3-pin ultra super mini	−30	∓0.1	∓0.2	0.2	−3	−0.01	0.02	−2.5	−0.0005	55	100	
2SJ353	SP-8	−60	∓1.5	∓3.0	1.0	−10	−1	1.0	−4	−0.8	0.58	0.68	
2SJ411	SP-8	−30	∓5	∓20	1.0	−10	−2.5	3.0	−4	−2.5	0.096	0.24	
2SJ460	SST	−50	∓0.1	∓0.2	0.25	−3	−0.01	0.01	−2.5	−0.003	75	100	
2SJ461	SC-59	−50	∓0.1	∓0.2	0.2	−3	−0.01	0.01	−2.5	−0.003	75	100	
2SJ462	MP-2	−12	∓2.5	∓5.0	2.0	−3	−1	1.5	−2.5	−0.5	0.23	0.3	
2SJ463	SC-70	−30	∓0.1	∓0.2	0.15	−3	−0.01	0.02	−2.5	−0.001	30	60	

Field Effect Transistor

Power MOS FET

■ 2SK type (1/4)

Part number	Package	Absolute maximum rating (T_A = 25 °C)				Electrical characteristics (T_A = 25 °C)							Applications
		V_{DSS} (V)	I_D		P_T	|yfs| (S)			$R_{DS(on)}$ (Ω)				
			DC (A)	Pulse (A)	T_C = 25 °C (W)	V_{DS} (V)	I_D (A)	MIN.	V_{GS} (V)	I_D (A)	TYP.	MAX.	
2SK611	MP-3	100	±1	±3	10	10	0.5	0.2	4	0.2	5.0	6.0	Switching
2SK612	MP-3	100	±2	±8	10	10	1	1	4	0.8	0.35	0.6	
2SK654	MP-3	100	±1	±3	10	10	0.5	0.5	4	0.2	1.7	4.0	
2SK699	MP-5	100	±2.0	±6.0	15	10	1	0.5	4	1	1.0	1.5	
2SK700	MP-5	80	±2	±6	15	10	1	0.5	4	1	0.8	1.0	
2SK701	MP-5	60	±2	±6	15	10	1	0.5	4	1	0.6	0.85	
2SK702	MP-25	100	±5	±20	50	10	3	5	4	5	0.25	0.5	
2SK703	MP-45	100	±5	±20	35	10	3	5	4	5	0.25	0.5	
2SK705	MP-45	60	±5	±20	35	10	3	5	4	5	0.17	0.3	
2SK738	MP-3	30	±2	±8	20	10	1	1	4	0.8	0.13	0.25	
2SK739	MP-3	60	±2	±8	20	10	1	1	4	0.8	0.25	0.35	
2SK801	MP-3	30	±2	±8	12	10	1	1	4	1	0.3	0.5	
2SK802	MP-5	30	±2	±8	15	10	1	1	4	1	0.3	0.5	
2SK814	MP-45	30	±15	±60	35	10	8.0	6	4	8.0	0.07	0.1	
2SK1059	MP-3	60	±5	±20	20	10	3.0	4	4	3.0	0.15	0.22	
2SK1060	MP-3	100	±5	±20	20	10	3.0	4	4	3.0	0.22	0.38	
2SK1122	MP-88	100	±40	±160	100	10	20	12	4	20	0.05	0.07	
2SK1123	MP-88	60	±40	±160	100	10	20	12	4	20	0.03	0.05	
2SK1198	MP-45	700	±2	±8	35	10	1.0	1	10	1.0	2.5	3.2	
2SK1271	MP-88	1400	±5	±10	150	20	3.0	1.5	10	3.0	3.5	4.0	
2SK1282	MP-3	60	±3	±12	20	10	2.0	2.4	4	2.0	0.2	0.3	
2SK1283	MP-5	60	±3	±12	20	10	2.0	2.4	4	2.0	0.2	0.3	
2SK1284	MP-3	100	±3	±12	20	10	2.0	2.4	4	2.0	0.32	0.45	
2SK1285	MP-5	100	±3	±12	20	10	2.0	2.4	4	2.0	0.32	0.45	
2SK1286	MP-45F	60	±15	±60	35	10	8.0	7	4	8.0	0.075	0.095	
2SK1287	MP-45F	100	±15	±60	35	10	8.0	7	4	8.0	0.12	0.14	
2SK1288	MP-25	100	±20	±80	60	10	8.0	7	4	8.0	0.12	0.14	
2SK1289	MP-45F	60	±25	±100	35	10	15	12	4	15	0.045	0.06	
2SK1290	MP-25	60	±30	±120	60	10	15	12	4	15	0.045	0.06	
2SK1292	MP-45F	100	±20	±100	35	10	15	12	4	15	0.07	0.085	
2SK1293	MP-25	100	±30	±120	60	10	15	12	4	15	0.07	0.085	
2SK1294	MP-45F	60	±40	±160	35	10	20	12	4	20	0.03	0.05	
2SK1295	MP-45F	100	±30	±160	35	10	20	12	4	20	0.06	0.075	
2SK1491	MP-88	250	±25	±100	120	10	13	7.0	10	13	0.12	0.15	
2SK1492	MP-88	250	±35	±140	140	10	18	10	10	18	0.08	0.1	
2SK1493	MP-25	450	±3.0	±12	50	10	2.0	1.0	10	2.0	2.2	2.8	
2SK1494	MP-25	500	±3.0	±12	50	10	2.0	1.0	10	2.0	2.4	3.0	
2SK1495	MP-25	450	±7.0	±28	50	10	4.0	3.0	10	4.0	0.7	0.9	

Field Effect Transistor

■ 2SK type (2/4)

Part number	Package	Absolute maximum rating (T_A = 25 °C)				Electrical characteristics (T_A = 25 °C)							Applications
		V_{DSS} (V)	I_D DC (A)	I_D Pulse (A)	P_T T_C = 25 °C (W)	|yfs| (S) V_{DS} (V)	|yfs| (S) I_D (A)	|yfs| (S) MIN.	$R_{DS(on)}$ (Ω) V_{GS} (V)	$R_{DS(on)}$ (Ω) I_D (A)	$R_{DS(on)}$ (Ω) TYP.	$R_{DS(on)}$ (Ω) MAX.	
2SK1496	MP-25	450	±7.0	±28	50	10	4.0	3.0	10	4.0	0.8	1.0	Switching
2SK1497	MP-88	450	±20	±80	130	10	10	7.5	10	10	0.28	0.35	
2SK1498	MP-88	500	±20	±80	130	10	10	7.5	10	10	0.32	0.40	
2SK1499	MP-88	450	±25	±100	160	10	13	8.0	10	13	0.20	0.25	
2SK1500	MP-88	500	±25	±100	160	10	13	8.0	10	13	0.22	0.27	
2SK1501	MP-25	900	±4.0	±8.0	70	10	2.0	1.0	10	2.0	2.8	4.0	
2SK1502	MP-88	900	±7.0	±14	120	10	4.0	2.0	10	4.0	1.7	2.0	
2SK1594	MP-45F	30	±20	±80	30	10	10	7.0	4	10	0.05	0.08	
2SK1596	MP-45F	30	±40	±160	35	10	20	20	4	20	0.02	0.03	
2SK1664	MP-45F	700	±2.0	±8.0	35	10	1.0	0.5	10	1.0	0.5	0.6	
2SK1748	MP-3	60	±8.0	±32	20	10	4.0	5.0	4	4.0	0.11	0.16	
2SK1749	MP-88	60	±50	±200	150	10	25	20	4	25	0.022	0.025	
2SK1750	MP-25	450	±5.0	±20	50	10	2.5	1.0	10	2.5	1.1	1.4	
2SK1751	MP-25	500	±5.0	±20	50	10	2.5	1.0	10	2.5	1.2	1.5	
2SK1752	MP-88	450	±10	±40	100	10	5.0	3.5	10	5.0	0.7	0.9	
2SK1753	MP-88	500	±10	±40	100	10	5.0	3.5	10	5.0	0.8	1.0	
2SK1756	MP-88	450	±15	±60	120	10	8.0	5.0	10	8.0	0.4	0.5	
2SK1757	MP-88	500	±15	±60	120	10	8.0	5.0	10	8.0	0.5	0.6	
2SK1758	MP-45F	600	±2.0	±8.0	30	10	1.0	0.5	10	1.0	2.8	4.2	
2SK1760	MP-88	900	±5.0	±10	100	20	3.0	1.0	10	3.0	3.1	4.0	
2SK1784	MP-88	450	±12	±48	100	10	6.0	1.5	10	6.0	0.5	0.6	
2SK1785	MP-88	500	±12	±48	100	10	6.0	1.5	10	6.0	0.6	0.7	
2SK1793	MP-25	900	±3.0	±6.0	75	20	2.0	0.8	10	2.0	6.2	7.5	
2SK1794	MP-88	900	±6.0	±12	100	20	3.0	2.0	10	3.0	1.8	2.8	
2SK1795	MP-88	900	±8.0	±16	140	20	4.0	1.0	10	4.0	1.3	1.6	
2SK1796	MP-88	900	±10	±20	150	20	5.0	1.5	10	5.0	1.0	1.2	
2SK1850	MP-10	60	±10	±40	1.8	10	5.0	7.0	4	5.0	0.08	0.095	
2SK1851	MP-10	60	±15	±60	1.8	10	7.5	12	4	7.5	0.045	0.06	
2SK1852	MP-10	100	±10	±40	1.8*	10	5.0	7.0	4	5.0	0.15	0.2	
2SK1853	MP-10	100	±15	±60	1.8*	10	7.5	12	4	7.5	0.08	0.1	
2SK1953	MP-45F	600	±2.0	±6.0	25*	20	1.0	0.5	10	1.0	4.2	5.0	
2SK1954	MP-3	180	±4.0	±16	20*	10	2.0	0.5	10	2.0	0.5	0.65	
2SK1988	MP-45F	450	±2.5	±10	30	10	1.5	0.9	10	1.5	2.2	2.8	
2SK1989	MP-45F	500	±2.5	±10	30	10	1.5	0.9	10	1.5	2.4	3.0	
2SK1990	MP-45F	450	±4.5	±18	30	10	2.5	1.5	10	2.5	1.1	1.4	
2SK1991	MP-45F	500	±4.5	±18	30	10	2.5	1.5	10	2.5	1.2	1.5	
2SK1992	MP-45F	450	±6.0	±24	35	10	3.0	2.8	10	3.0	0.7	0.9	
2SK1993	MP-45F	500	±6.0	±24	35	10	3.0	2.8	10	3.0	0.8	1.0	
2SK1994	MP-45F	900	±2.0	±4.0	30	20	1.0	0.6	10	1.0	6.2	7.5	
2SK1995	MP-45F	900	±3.0	±6.0	35	20	2.0	1.0	10	2.0	3.2	4.0	

*: T_A = 25°C

Field Effect Transistor

■ 2SK type (3/4)

Part number	Package	Absolute maximum rating (T_A = 25 °C)				Electrical characteristics (T_A = 25 °C)							Applications
		V_{DSS} (V)	I_D DC (A)	I_D Pulse (A)	P_T T_C = 25 °C (W)	|yfs| (S) V_{DS} (V)	|yfs| (S) I_D (A)	|yfs| (S) MIN.	$R_{DS(on)}$ (Ω) V_{GS} (V)	$R_{DS(on)}$ (Ω) I_D (A)	$R_{DS(on)}$ (Ω) TYP.	$R_{DS(on)}$ (Ω) MAX.	
2SK2040	MP-3	600	±2.0	±6.0	20	20	1.0	0.5	10	1.0	4.2	5.0	Switching
2SK2131	MP-45F	150	±15	±60	35	10	8.0	10	10	8.0	0.1	0.12	
2SK2132	MP-10	180	±4	±16	1.8	10	2.0	0.5	10	2.0	0.52	0.65	
2SK2133	MP-25	250	±16	±64	75	10	8.0	4.0	10	8.0	0.21	0.26	
2SK2134	MP-25	200	±13	±52	70*	10	7.0	2	10	7.0	0.32	0.4	
2SK2135	MP-45F	200	±14	±56	35	10	7.0	4	10	7.0	0.14	0.18	
2SK2136	MP-25	200	±20	±80	75	10	10	4	10	10	0.14	0.18	
2SK2137	MP-45F	600	±4	±16	30	10	20	1	10	2.0	2.0	2.4	
2SK2138	MP-25	600	±5	±20	70	10	2.5	1	10	2.5	2.0	2.4	
2SK2139	MP-45F	600	±5	±20	35	10	2.5	1.5	10	2.5	1.25	1.5	
2SK2140	MP-25	600	±7	±28	75	10	3.5	1.5	10	3.5	1.25	1.5	
2SK2141	MP-45F	600	±6	±24	40	10	3.0	2.0	10	3.0	0.9	1.1	
2SK2234	MP-45F	500	±8	±32	40	10	4.0	3.0	10	4.0	0.5	0.6	
2SK2275	MP-45F	900	±3.5	±7.0	35	20	2.0	4.0	10	2.0	2.4	2.8	
2SK2341	MP-45F	250	±11	±44	35	10	6.0	3.0	10	6.0	0.21	0.26	
2SK2409	MP-45F	60	±40	±160	35	10	20	20	4	20	0.03	0.05	
2SK2410	MP-45F	60	±30	±120	35	10	15	15	4	15	0.04	0.06	
2SK2411	MP-25	60	±30	±120	75	10	15	15	4	15	0.04	0.06	
2SK2412	MP-45F	60	±20	±80	30	10	10	7	4	10	0.067	0.095	
2SK2413	MP-10	60	±10	±40	1.8*	10	5	7	4	10	0.07	0.095	
2SK2414	MP-3	60	±10	±40	20	10	5	7	4	10	0.07	0.095	
2SK2415	MP-3	60	±8.0	±32	20	10	4	5	4	4	0.1	0.15	
2SK2461	MP-45F	100	±20	±80	35	10	10	12	4	10	0.07	0.1	
2SK2462	MP-45F	100	±15	±60	30	10	8	7	4	8	0.12	0.17	
2SK2476	MP-45F	800	±3.0	±9.0	40	20	2	1	10	2	3.4	5.0	
2SK2477	MP-45F	800	±10	±30	150	20	5	3.5	10	5	0.65	1.0	
2SK2478	MP-88	900	±2.0	±8.0	30	20	1	0.6	10	1	5.0	7.5	
2SK2479	MP-25	900	±3.0	±8.0	70	20	2	0.8	10	2	5.6	7.5	
2SK2480	MP-45F	900	±3.5	±12	35	20	2	1	10	2	3.2	4.0	
2SK2481	MP-25	900	±4.0	±12	70	20	2	1	10	2	3.2	4.0	
2SK2482	MP-88	900	±5.0	±12	100	20	3	1	10	3	3.2	4.0	
2SK2483	MP-45F	900	±3.5	±10.5	40	20	2	1	10	2	2.2	2.8	
2SK2484	MP-25	900	±5.0	±10	75	20	3	2	10	3	2.2	2.8	
2SK2485	MP-88	900	±6.0	±12	100	20	3	2	10	3	2.2	2.8	
2SK2486	MP-88	900	±7.0	±18	120	20	4	2.5	10	4	1.4	2.0	
2SK2487	MP-88	900	±8.0	±20	140	20	4	3.0	10	4	1.1	1.6	
2SK2488	MP-88	900	±10	±30	150	20	5	6	10	5	1.0	1.2	
2SK2498	MP-45F	60	±50	±200	35	10	25	20	4	25	0.011	0.014	
2SK2499	MP-25	60	±50	±200	75	10	25	20	4	25	0.011	0.014	
2SK2510	MP-45F	60	±40	±160	35	10	20	13	4	20	0.024	0.03	

*: T_A = 25°C

Field Effect Transistor

■ 2SK type (4/4)

Part number	Package	Absolute maximum rating (T_A = 25 °C)				Electrical characteristics (T_A = 25 °C)							Applications
		V_{DSS} (V)	I_D		P_T T_C = 25 °C (W)	|yfs| (S)			$R_{DS(on)}$ (Ω)				
			DC (A)	Pulse (A)		V_{DS} (V)	I_D (A)	MIN.	V_{GS} (V)	I_D (A)	TYP.	MAX.	
2SK2511	MP-88	60	±40	±160	80	10	20	10	4	20	0.032	0.04	Switching
2SK2512	MP-45F	60	±45	±180	35	10	23	15	4	23	0.016	0.023	
2SK2513	MP-25	60	±45	±180	75	10	23	15	4	23	0.016	0.023	
2SK2514	MP-88	60	±50	±200	150	10	25	15	4	25	0.016	0.023	
2SK2515	MP-88	60	±50	±200	150	10	25	20	4	25	0.011	0.014	
2SK2723	MP-45F	60	±25	±100	25	10	13	8	4	13	0.045	0.06	
2SK2724	MP-45F	60	±35	±140	30	10	18	10	4	18	0.033	0.04	

Field Effect Transistor

■ 2SJ type

Part number	Package	Absolute maximum rating (T_A = 25 °C)				Electrical characteristics (T_A = 25 °C)							Applications
		V_{DSS} (V)	I_D		P_T T_C = 25 °C (W)	$\lvert y_{fs} \rvert$ (S)			$R_{DS(on)}$ (Ω)				
			DC (A)	Pulse (A)		V_{DS} (V)	I_D (A)	MIN.	V_{GS} (V)	I_D (A)	TYP.	MAX.	
2SJ128	MP-3	−100	∓2	∓8	20	−10	−1	1	−4	−0.8	1.1	1.5	Switching
2SJ132	MP-3	−30	∓2	∓8	20	−10	−1	1	−4	−0.8	0.47	0.6	
2SJ133	MP-3	−60	∓2	∓8	20	−10	−1	1	−4	−0.8	0.7	1.3	
2SJ134	MP-25	−100	∓6	∓24	40	−10	−3.5	1	−4	−3.5	0.5	0.9	
2SJ135	MP-45	−100	∓5	∓20	30	−10	−3.5	1	−4	−3.5	0.5	0.9	
2SJ136	MP-25	−60	∓12	∓48	40	−10	−6.5	2	−4	−6.5	0.45	0.5	
2SJ137	MP-45	−60	∓10	∓40	30	−10	−6.5	2	−4	−6.5	0.45	0.5	
2SJ138	MP-25	−100	∓12	∓48	60	−10	−6.5	2	−4	−6.5	0.3	0.45	
2SJ139	MP-45	−100	∓10	∓40	35	−10	−6.5	2	−4	−6.5	0.3	0.45	
2SJ140	MP-25	−60	∓19	∓76	60	−10	−10	5	−4	−8	0.3	0.4	
2SJ141	MP-45	−60	∓13	∓52	35	−10	−10	5	−4	−8	0.3	0.4	
2SJ142	MP-45	−100	∓13	∓52	35	−10	−10	5	−4	−8	0.25	0.3	
2SJ143	MP-45	−60	∓16	∓64	35	−10	−10	5	−4	−10	0.22	0.25	
2SJ151	MP-25	−100	∓3.0	∓6.0	35	−10	−1.5	0.8	−4	−1.5	—	1.8	
2SJ152	MP-45	−100	∓3.0	∓6.0	30	−10	−1.5	0.8	−4	−1.5	—	1.8	
2SJ302	MP-25	−60	∓16	∓64	75	−10	−8	6.0	−4	−6	0.13	0.24	
2SJ303	MP-45F	−60	∓14	∓56	35	−10	−7	5.0	−4	−6	0.13	0.24	
2SJ324	MP-3	−30	∓2.0	∓8.0	20	−10	1.0	1.0	−4	−0.8	0.40	0.52	
2SJ325	MP-3	−30	∓4.0	∓16	20	−10	2.0	3.0	−4	−1.6	0.15	0.24	
2SJ326	MP-3	−60	∓2.0	∓8.0	20	−10	−1.0	1.0	−4	−0.8	0.5	0.68	
2SJ327	MP-3	−60	∓4.0	∓16	20	−10	−2.0	3.0	−4	−1.6	0.22	0.34	
2SJ328	MP-25	−60	∓20	∓80	75	−10	−10	8.0	−4	−8	0.085	0.11	
2SJ329	MP-45F	−60	∓15	∓60	35	−10	−8	8.0	−4	−6	0.085	0.11	
2SJ330	MP-45F	−60	∓20	∓80	35	−10	−10	10	−4	−8	0.065	0.09	
2SJ331	MP-88	−60	∓30	∓120	150	−10	−15	15	−4	−12	0.04	0.055	
2SJ448	MP-45F	−250	∓4	∓16	30	−10	−2	1	−10	−2	1.5	2.0	
2SJ449	MP-45F	−250	∓6	∓24	35	−10	−3	2	−10	−3	0.55	0.8	

Field Effect Transistor

■ Low Voltage Power MOS FET (N3-L series)

DC drain current $I_{D(DC)}$ (A)	Drain to source voltage V_{DSS} (V) 30	60	100/[150]	Package
~ 4.0	△ 2SJ324 (0.25/0.52) △ 2SJ325 (0.11/0.24)	△ 2SK1282 (0.18/0.24) ◇ 2SK1283 (0.18/0.24) △ 2SJ326 (0.37/0.68) △ 2SJ327 (0.17/0.34)	△ 2SK1284 (0.32/0.40) ◇ 2SK1285 (0.32/0.40)	
~ 8.0		◎ 2SK1748 (0.11/0.16)		△ : MP-3
~ 10		◎ 2SK1850 (70 m/95 m)	◎ 2SK1852 (0.15/0.20)	◇ : MP-5
~ 15		2SK1851 (45 m/60 m) ● 2SK1286 (70 m/95 m) ● 2SJ303 (0.1/0.24) ● 2SJ329 (60 m/0.11)	◎ 2SK1853 (80 m/0.10) ● 2SK1288 (0.15/0.20) [● 2SK2131 (0.12/0.20)]	○ : MP-25 ● : MP-45F ◎ : MP-10
~ 20	● 2SK1594 (50 m/80 m)	○ 2SK1287 (70 m/95 m) ○ 2SJ302 (0.1/0.24) ○ 2SJ328 (60 m/0.11) ● 2SJ330 (50 m/90 m)	○ 2SK1289 (0.15/0.20) ● 2SK1292 (80 m/0.10)	⊡ : MP-88
~ 25		● 2SK1290 (45 m/60 m)		
~ 30	● 2SK1595 (30 m/50 m)	○ 2SK1291 (45 m/60 m) ⊡ 2SJ331 (30 m/55 m)	○ 2SK1293 (80 m/0.10) ● 2SK1295 (50 m/70 m)	( ): $R_{DS(on)}$ (@V_{GS} = 10 V/
~ 40	● 2SK1596 (20 m/30 m)	● 2SK1294 (27 m/50 m) ⊡ 2SK1123 (27 m/50 m)	⊡ 2SK1122 (50 m/70 m)	V_{GS} = 4 V) [Ω MAX.]
~ 50		⊡ 2SK1749 (18 m/25 m)		

■ Low Voltage Power MOS FET (N4-L series/N5-L series)

DC drain current $I_{D(DC)}$ (A)	Drain to source voltage V_{DSS} (V) 60	100	Package
8.0	△ 2SK2415 (0.1/0.15)		
10	◎ 2SK2413 (70 m/95 m) △ 2SK2414 (70 m/95 m)		
15		● 2SK2462 (0.14/0.17)	
20	● 2SK2412 (70 m/95 m)	● 2SK2461 (80 m/0.1)	△ : MP-3
30	● 2SK2723 (40 m/60 m)* ○ 2SK2411 (40 m/60 m)		◇ : MP-5 ○ : MP-25
40	● 2SK2724 (27 m/40 m)* ● 2SK2510 (20 m/30 m)* ⊡ 2SK2511 (27 m/40 m)*		● : MP-45F ◎ : MP-10 ⊡ : MP-88
45	● 2SK2512 (15 m/23 m)* ○ 2SK2513 (15 m/23 m)*		
50	● 2SK2498 (9 m/14 m)* ○ 2SK2499 (9 m/14 m)* ⊡ 2SK2514 (15 m/23 m)* ⊡ 2SK2515 (9 m/14 m)*		

*: N5-L series

Field Effect Transistor

■ High Voltage Power MOS FET (N3-H series)

DC drain current $I_{D(DC)}$ (A)	Drain to source voltage V_{DSS} (V)					Package
	180/250	450	500	600	900	
2.0				● 2SK1758 (4.2)	● 2SK1994 (7.5)	
2.5		● 2SK1988 (2.8)	● 2SK1989 (3.0)			
3.0		○ 2SK1493 (2.8)	○ 2SK1494 (3.0)		○ 2SK1793 (7.5) ● 2SK1995 (4.0)	
3.5					● 2SK2275 (2.8)	△ : MP-3
4.0					○ 2SK1501 (4.0)	○ : MP-25
4.5		● 2SK1990 (1.4)	● 2SK1991 (1.5)			● : MP-45F
5.0		○ 2SK1750 (1.4)	○ 2SK1751 (1.5)		⊡ 2SK1760 (4.0)	⊡ : MP-88
6.0		● 2SK1992 (0.9)	● 2SK1993 (1.0)		⊡ 2SK1794 (2.8)	
7.0		○ 2SK1495 (0.9)	○ 2SK1496 (1.0)		⊡ 2SK1502 (2.0)	
8.0			● 2SK2234 (0.6)		⊡ 2SK1795 (1.6)	
10		⊡ 2SK1752 (0.9)	⊡ 2SK1753 (1.0)		⊡ 2SK1796 (1.2)	
12		⊡ 2SK1784 (0.6)	⊡ 2SK1785 (0.7)			
15		⊡ 2SK1756 (0.5)	⊡ 2SK1757 (0.6)			
20		⊡ 2SK1497 (0.35)	⊡ 2SK1498 (0.4)			( ): $R_{DS(on)}$
25	⊡ 2SK1491 (0.15)	⊡ 2SK1499 (0.25)	⊡ 2SK1500 (0.27)			(@V_{GS} = 10 V) [Ω MAX.]
35	⊡ 2SK1492 (0.10)					

■ High Voltage Power MOS FET (N4-H series/P4-H series)

DC drain current $I_{D(DC)}$ (A)	Drain to source voltage V_{DSS} (V)						Package
	[180]/200	250	450	500	600	[800]/900	
2.0					● 2SK1953 (5.0) △ 2SK2040 (5.0)	● 2SK2478 (7.5)	
3.0						[● 2SK2476 (5.0)] ○ 2SK2479 (7.5) ● 2SK2480 (4.0)	△ : MP-3
4.0	[△ 2SK1954 (0.65) ◎ 2SK2132 (0.65)]	● 2SJ448 (2.0)			● 2SK2137 (2.4)	○ 2SK2481 (4.0) ● 2SK2483 (2.8) (3.5 A)	○ : MP-25 ◎ : MP-10 ● : MP-45F
4.5			● 2SK2353 (1.4)	● 2SK2354 (1.5)			⊡ : MP-88
5.0			○ 2SK2355 (1.4)	○ 2SK2356 (1.5)	○ 2SK2138 (2.4) ● 2SK2139 (1.5)	⊡ 2SK2482 (4.0) ○ 2SK2484 (2.8)	
6.0		● 2SJ449 (0.8)	● 2SK2357 (0.9)	● 2SK2358 (1.0)	● 2SK2141 (1.1)	⊡ 2SK2485 (2.8)	
7.0			○ 2SK2359 (0.9)	○ 2SK2360 (1.0)	○ 2SK2140 (1.5)	⊡ 2SK2486 (2.0)	
8.0			● 2SK2363 (0.5)	● 2SK2364 (0.6)		⊡ 2SK2487 (1.6)	
10			⊡ 2SK2361 (0.9) ○ 2SK2365 (0.5)	⊡ 2SK2362 (1.0) ○ 2SK2366 (0.6)		[⊡ 2SK2477 (1.0)] ⊡ 2SK2488 (1.2)	
11		● 2SK2341 (0.26)					
13	○ 2SK2134 (0.4)						
14	● 2SK2135 (0.18)						
15			⊡ 2SK2367 (0.5)	⊡ 2SK2368 (0.6)			
16		○ 2SK2133 (0.26)					
20	○ 2SK2136 (0.18)		⊡ 2SK2369 (0.35)	⊡ 2SK2370 (0.4)			
25			⊡ 2SK2371 (0.25)	⊡ 2SK2372 (0.27)			

Field Effect Transistor

■ 8-pin SOP Type Power MOS FET

On-Resistance R_{DS} (on) (mΩ) @V_{GS} = 10 V	Drain to source voltage V_{DSS} (V)	
	20	30
~90	μPA1750 (P-ch, dual)	
~70		μPA1710 (P-ch, single)
~40	μPA1752 (N-ch, dual)*	μPA1711 (P-ch, single)
~30		μPA1751 (N-ch, dual)
~20	μPA1701 (N-ch, single)*	μPA1700 (N-ch, single)
~10		μPA1702 (N-ch, single)

*: 2.5 V drive is possible. Otherwise 4 V drive is possible.

■ Power SOP8 series

Part number	Package	Absolute maximum rating (T_A = 25 °C)				Electrical characteristics (T_A = 25 °C)							Applications
		V_{DSS} (V)	I_D		P_T T_C = 25 °C (W)	|yfs| (S)			$R_{DS(on)}$ (Ω)				
			DC (A)	Pulse (A)		V_{DS} (V)	I_D (A)	MIN.	V_{GS} (V)	I_D (A)	TYP.	MAX.	
μPA1700	Power SOP8	30	±7	±28	2.0*[1]	10	3.5	5.0	4	3.5	0.040	0.050	Switching
μPA1701	Power SOP8	20	±7	±28	2.0*[1]	10	3.5	5.0	2.5	3.5	0.031	0.048	
μPA1702	Power SOP8	30	±8	±32	2.0*[1]	10	4	6.0	4	4	0.018	0.025	
μPA1710	Power SOP8	–30	∓5	∓20	2.0*[1]	–10	–2.5	3.0	–4	–2.5	0.11	0.16	
μPA1711	Power SOP8	–30	∓7	∓28	2.0*[1]	–10	–3.5	5.0	–4	–3.5	0.049	0.07	
μPA1750	Power SOP8	–20	∓3.5	∓14	2.0*[2]	–10	–1.8	2.0	–4	–1.8	0.125	0.18	
μPA1751	Power SOP8	30	±5	±20	2.0*[2]	10	2.5	3.0	4	2.5	0.044	0.064	
μPA1752	Power SOP8	20	±5	±20	2.0*[2]	10	2.5	5.0	2.5	2.5	0.042	0.061	

*1: T_A = 25°C, Mounted on ceramic substrate of 1200 mm^2 × 0.7 mm
*2: T_A = 25°C, 2 circuits, Mounted on ceramic substrate of 2000 mm^2 × 1.1 mm

For further information, please contact:

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